# 5.7 Biological Resources

## 5.7.1 Introduction

The Biological Resources section of the EIR analyzes the potential short-term, long-term, and cumulative impacts resulting from the construction and operation of the Project and alternatives. The Biological Resources discussion will assess the Biological Resources in the proposed Shingle Springs Interchange area.

## 5.7.2 Environmental Setting

### *Vegetation*

Vegetative communities are assemblages of plant species that occur together in the same area. They are defined by species composition and relative abundance. The vegetative community descriptions and nomenclature generally follows the classification system provided in Sawyer and Keeler-Wolf's *A Manual of California Vegetation* (1995). The vegetative communities described below generally correlate with wildlife habitat types. The wildlife habitats identified in this section were described using California Department of Fish and Game's (CDFG's) *A Guide to Wildlife Habitats* (Mayer and Laudenslayer, 1988).

#### *Mixed Oak Series*

The primary plant community associated with the project site consists of mixed oak woodland. Structurally, most of the woodland on the project site is two-tiered, being composed of a dense overstory of interior live oak (*Quercus wislizenii*) and blue oak (*Q. douglasii*) and a well-developed understory of various shrub species. Other dominate tree species that occur on the project site include valley oak (*Q. lobata*), black oak (*Q. kelloggii*), California buckeye (*Aesculus californica*), foothill pine (*Pinus sabiniana*), and ponderosa pine (*Pinus ponderosa*). The shrub understory is primarily composed of toyon (*Heteromeles arbutifolia*), California coffeeberry (*Rhamnus californica*), whiteleaf manzanita (*Arctostaphylos viscida*), coyotebrush (*Baccharis pilularis* var. *sanguinea*), buckbrush (*Ceanothus cuneatus*), and poison oak (*Toxicodendron diversilobum*). Common native and non-native grasses within this community include blue wildrye (*Elymus glaucus*), timothy grass (*Phleum pratense*), medusahead (*Tainenantherum medusae*), and vulpia (*Vulpia macrostachys*). Intermixed within these species are several native and non-native forbs including bedstraw (*Galium nuttallii*), curly dock (*Rumex crispus*), fairy lanterns (*Calochortus alba*), mule ears (*Wyethia* spp.), and soaproot (*Chlorogalum pomeridianum*). Riparian areas contain Fremont's cottonwood (*Populus fremontii fremontii*) and two species of willow, narrow-leaved willow (*Salix exigua*) and pacific willow (*S. lucida*).

### *Mixed Willow Series*

This plant community is associated with the topographic depressions and banks of the intermittent drainages within Proposed Project site, and occurs in only two locations. The mixed oak habitat is interspersed with riparian species including narrow-leaved willow, pacific willow, and black walnut (*Juglans californica*), with an understory dominated by Himilayan blackberry (*Rubus discolor*). This riparian habitat occurs in areas that accumulate wet weather flow from the intermittent drainages.

### *California Annual Grassland Series*

California annual grasslands are interspersed throughout the project site, especially on the drier portions of the site. This series corresponds to the annual grassland wildlife habitat type. Dominant species within this community include ripgut brome (*Bromus diandrus*), yellow star thistle (*Centaurea solstitalis*), paintbrush (*Castilleja* spp.), quaking grass (*Briza maxima*), and blue wildrye (*Elymus glaucus*).

### *Mixed Chaparral Series*

This plant community is a structurally homogenous brushland type dominated by shrubs with thick, stiff, heavily cutinized evergreen leaves. Mixed chaparral is typically a dense, nearly impenetrable thicket with greater than 80% absolute shrub cover. Within the project site, patches of this habitat occur along Highway 50 near the barren road-cut areas. A few other patches are interspersed within the oak woodland habitat. Species occurring within the chaparral community around the Proposed Project location include buckbrush (*Ceonothus cuneatus*), toyon (*Heteromeles arbutifolia*), and whiteleaf manzanita (*Arctostaphylos viscida*).

## ***Wetlands and Waters of the U.S.***

Regulated wetlands and other waters of the United States are subject to jurisdiction under Section 404 of the Clean Water Act. No seasonal wetlands occur on the interchange project site. However, several intermittent features were identified, which qualify as waters of the U.S., and are shown in **Figure 5.7-1**. The precise contours of Federal jurisdiction over waters found on the project site are still being settled subsequent to the 2001 Supreme Court decision invalidating earlier agency regulations.

The project site was surveyed for potentially jurisdictional features during a field survey on December 27, 2001. A formal wetland delineation was performed at this time using parameters suggested in the 1987 ACOE Manual (ACOE, 1987). The 1987 ACOE Manual employs the three-parameter approach to wetland delineation; that is, hydrophytic vegetation, hydric soils,

Figure 5.7-1 – Habitat Types

and wetland hydrology must all be present for an area to be classified as a jurisdictional wetland. The limit of the "waters of the U.S." for the Proposed Project was determined through field mapping the course of channel features, and obtaining an average width of each feature, based on indicators such as vegetation limits, the location of sediment deposits, and watermarks. Regulated wetlands and other waters of the United States are subject to jurisdiction under Section 404 of the Clean Water Act. Based on the survey, no wetlands were identified, but several intermittent drainages were found to exist within the analysis area. **Table 5.7-1** provides a summary of the "waters of the U.S." features in the project site, including acres within the analysis area. The majority of the intermittent streams identified in the analysis area could potentially be indirectly affected by construction. Approximately 0.09 acres (0.036 hectares) of jurisdictional waters would be directly impacted by the Proposed Project.

### Table 5.7-1 Potentially Impacted Jurisdictional Waters Within the Analysis Area

| Wetland Type | Total Acreage (Hectares) | Direct Impact | Temporary Impact |
|---|---|---|---|
| Other Waters of the U.S. (Intermittent Drainage) | 0.033 (0.013) | 0.003 (0.001) | 0.030 (0.012) |
| Other Waters of the U.S. (Intermittent Pond) | 0.052 (0.021) | 0.052 (0.021) | - |
| Other Waters of the U.S. (Drainage Ditch) | 0.005 (0.002) | 0.002 (0.001) | 0.003 (0.001) |
| **Total** | **0.090 (0.036)** | **0.057 (0.023)** | **0.033 (0.013)** |

*Source*: AES, 2001; ECORP, 2001.

#### *Waters of the U.S.*

Intermittent drainages occur on the project site which meet the requirements of jurisdictional waters (i.e., have a defined channel and ordinary high water mark). These features exhibit scoured banks in some areas, with the majority of the channels located within annual grassland habitat. A small section of drainage along the south side of U.S. Highway 50 contains riparian/mixed oak woodland habitat within areas of topographic depression and stormwater accumulation. Vegetation within this riparian area includes narrow-leaved willow, pacific willow, Himalayan blackberry, blue oak, and interior liveoak. A intermittent drainage with discontinuous bed and bank, flows through the center of the 5± acre parcel and drains into an intermittent feature that once served as a stock pond. The stock pond only holds significant amounts of water after heavy rain, and consists of an earthen dam and overflow ditch for high-water events. The ditch directs water towards an intermittent drainage, which is flows parallel to Highway 50 and does not exhibit riparian vegetation or an ordinary high water mark. During or after wet weather events, this drainage flows through a culvert to the south side of Highway 50, where it joins another intermittent drainage. This southern drainage flows parallel to Highway

50, just outside the project's southeastern boundary, and eventually drains into a pond. The pond is semi-permanently flooded, and most likely functions as a stock pond. During high water events this stock pond overflows into Slate Creek, a perennial stream located approximately 450 feet (137.2 meters) east of the Proposed Project site.

### *Slate Creek Aquatic System*

Slate Creek is a perennial stream that originates near the town of El Dorado, southeast of the Rancheria. Slate Creek flows under Highway 50 in an easterly direction and turns to the north flowing through the adjoining parcels east of the existing Rancheria, and approximately 450 feet (137.2 meters) east of the project site (**Figure 5.7-1**). The banks of Slate Creek are incised due to scouring action of stream flow. The streambed is rocky and contains woody debris. Measuring bank to bank, the average width of Slate Creek is approximately 50 feet (15.2 meters). The channel is typically perennial, with the largest water flows being present primarily from November through May. The banks of the channel are defined by a sharp rise in elevation, with a predominance of boulders. The depth of Slate Creek varies from as shallow as 0.5 feet (0.15 meter) in areas containing riffles to as deep as six feet (1.8 meters) in larger pools, with an average depth of two feet (0.6 meter).

Upland vegetation associated with the banks of Slate Creek is comprised of mixed oak woodland, which includes interior live oak, California buckeye, foothill pine, Himalayan blackberry, poison oak, and toyon.

## *Wildlife Habitats*

### *Oak Woodlands / Chaparral*

Oak woodlands are important wildlife habitats that provide abundant cover, foraging, nesting, and resting opportunities. Species common to this habitat include acorn woodpecker (*Melanerpes formicivorus*), oak titmouse (*Parus inornatus*), bushtit (*Psaltriparus minimus*), white-breasted nuthatch (*Sitta carolinensis*), California scrub jay (*Aphelocoma californica*), western gray squirrel (*Sciurus griseus*), dusky-footed woodrat (*Neotoma fuscipes*), striped skunk (*Mephitis mephitis*), and black-tailed deer (*Odocoileus hemionus californicus*). Black-tailed deer use the woodland to forage and rest, and as a movement corridor to access other habitat types. Red-shouldered hawk (*Buteo lineatus*), red-tailed hawk (*Buteo jamaicensis*), Cooper's hawk (*Accipiter cooperii*), and great horned owl (*Bubo virginianus*) may nest within this community and forage within it or adjacent grasslands. Bats, such as fringed myotis (*Myotis thysanodes*), California myotis (*Myotis californicus*), and pallid bat (*Antrozous pallidus*) are likely to occur in

oak woodlands as well. Reptile and amphibian species common to blue oak woodland include western fence lizard (*Sceloporus occidentalis*), western rattlesnake (*Crotalus viridis*), common kingsnake (*Lampropeltis getulus*), sharp-tailed snake (*Contia tenuis*), and California slender salamander (*Batrachoseps attenuatus*).

### *Annual Grasslands*

California annual grassland provides foraging and breeding habitat for many wildlife species. Grasslands are important foraging grounds for several species including California vole (*Microtus californicus*), Botta's pocket gopher (*Thomomys bottae*), western harvest mouse (*Reithrodontomys megalotis*), deer mouse (*Peromyscus maniculatus*), broad-footed mole (*Scapanus latimanus*), California ground squirrel (*Spermophilus beecheyi*), coyote (*Canis latrans*), black-tailed deer (*Odocoileus hemionus*), and black-tailed jackrabbit (*Lepus californicus*). Small rodents attract raptors (birds of prey) including red-tailed hawk (*Buteo jamaicensis*), American kestrel (*Falco sparverius*), white-tailed kite (*Elanus caeruleus*), red-shouldered hawk (*Buteo lineatus*), and barn owl (*Tyto alba*). This habitat also attracts avian seed and insect eaters. California quail (*Callipepla californica*), mourning dove (*Zenaida macroura*), savanna sparrow (*Passerculus sandwichensis*), and western meadowlark (*Sturnella neglecta*) are a few seed eaters that may forage in grasslands. Insect eaters such as scrub jay, western kingbird (*Tyrannus verticalis*), barn swallow (*Hirundo rustica*), white-throated swift (*Aeronautes saxatalis*) and mockingbird (*Mimus polyglottus*) may also use the habitat for foraging. Due to the relatively dry nature of this plant community, few if any amphibian species inhabit this habitat. However, annual grassland does provide suitable shelter, basking sites, and foraging habitat for reptiles such as western rattlesnake (*Crotalus viridis*), common kingsnake (*Lampropeltis getulus*), Pacific gopher snake (*Pituophis melanoleucus catenifer*), striped racer (*Masticophis lateralis*), and western fence lizard (*Sceloporus occidentalis*).

### *Riparian / Slate Creek*

Stafford Lehr, an aquatic biologist with the CDFG (Region 2), was consulted to determine potential aquatic species associated with Slate Creek (Lehr, 1998). Mr. Lehr indicated that the CDFG had not performed any surveys for aquatic organisms within Slate Creek. Based on existing data and knowledge for the region, it is unlikely that Slate Creek supports salmonid species (i.e., steelhead, salmon). Fish species likely to occur in Slate Creek include Sacramento sucker (*Castosomus occidentalis*), California roach (*Hesperoleucus symmetricus*), green sunfish (*Lepomis cyanellus*), and bluegill (*Lepomis macrochirus*). Hardhead (*Mylopharodon conocephalus*) and Sacramento squawfish (*Pytchocheilus grandis*) may also occur. Slate Creek provides suitable habitat for foothill yellow-legged frog (*Rana boylii*) and marginally suitable habitat for California red-legged frog (*Rana aurora draytonii*) and northwestern pond turtle

(*Clemmys marmorata marmorata*). California red-legged frog and northwestern pond turtle prefer slower moving streams with dense, shrubby riparian vegetation.

### *Special-Status Species*

**Table 5.7-2** lists the special-status-species with potential to occur in the project site. This list was compiled based on the references discussed in Section 3.2. Reconnaissance surveys of the project site were conducted for special-status plants and animals with potential habitat in the project site. Species in **bold** type have the *potential* to be impacted by the Proposed Project. Specific surveys were conducted within appropriate habitat areas within or near the project site for the federally listed California red-legged frog, valley elderberry longhorn beetle, and rare plants. A list of all species encountered in the project site is provided in **Appendix G**. They are discussed in greater detail in the Impacts section.

## 5.7.3 Regulatory Setting

The Proposed Project will require a US Army Corps of Engineers Section 404 Nationwide Permit #14 (Linear Transportation Crossings) for approximately 0.057 acre (0.023 hectare) of fill to intermittent drainages and intermittent pond (Waters of the U.S.) located within the Proposed Project site. A Clean Water Act Section 401 Water Quality Certification Permit from the Regional Water Quality Control Board is also required for the discharge of dredge or fill material into Waters of the U.S.. Additionally, a Streambed Alteration Agreement (SAA) will be required by the California Department of Fish and Game.

### *Permits*

#### *U.S. Army Corp Of Engineers Section 404 Permit*

Based on the current engineering drawings for the two design alternatives, the Proposed Project would qualify for Nationwide Permit (NWP) 14 (Linear Transporation Crossings). Based on the amount of fill that would occur (up to 0.057 acre or 0.023 hectare), a Pre-Construction Notification would not be necessary; however, it is recommended to ensure compliance with the Endangered Species Act and other acts.

#### *Regional Water Quality Control Board Section 401 Certification*

A Section 401 water quality certification will be required from the Regional Water Quality Control Board (RWQCB) prior to the discharge of any material into a regulated waterway.

## Table 5.7-2 List of Potentially Affected Species

| Species | Status Federal/State/ CNPS | Preferred Habitat & Diet | Potential for Project to Affect |
|---|---|---|---|
| Spotted bat<br>*Euderma maculatum* | FSC/CSC/-- | Variety of habitats, though rare; prefers cliffs; solitary/ more common in S. California; occasionally ranges N. to Tuolumne and Calaveras Counties. | Highly unlikely. No roosting habitat or known populations have the potential to be affected. |
| Greater western mastiff bat<br>*Eumops perotis californicus* | FSC/CSC/-- | Uncommon resident in SE San Joaquin Valley and Coast Ranges. Variety of open, dry habitats with suitable roosts e.g., vertical cliffs. | Highly unlikely. No roosting habitat or known populations have the potential to be affected. |
| Small-footed myotis<br>*Myotis ciliolabrum* | FSC/--/-- | Forages over grasslands and roosts in buildings, caves and rock crevices in relatively arid wooded and brushy uplands near water | Highly unlikely. No roosting habitat or known populations have the potential to be affected. |
| **Long-eared myotis**<br>***Myotis evotis*** | **FSC/--/--** | **Forages over grasslands and roosts in snags, buildings, rock crevices, and primarily caves.** | **Medium Potential. The project site and/or immediate area provide limited suitable habitat for this species.** |
| **Fringed myotis**<br>***Myotis thysanodes*** | **FSC/--/--** | **Forages over grasslands and roosts in snags, buildings, rock crevices, and primarily caves.** | **Medium Potential. The project site and/or immediate area provide limited suitable habitat for this species.** |
| **Long-legged myotis**<br>***Myotis volans*** | **FSC/--/--** | **Forages over grasslands and roosts in snags, buildings, rock crevices, and primarily caves.** | **Medium Potential. The project site and/or immediate area provide limited suitable habitat for this species.** |
| Yuma myotis<br>*Myotis yumanensis* | FSC/CSC/-- | Forages over open water and streams and roosts in buildings, caves and rock crevices | Highly unlikely. No roosting habitat or known populations have the potential to be affected. |
| Bald eagle<br>*Haliaeetus leucocephalus* | FT/--/-- | Breeds in coastal habitats (lakes and rivers) and mixed conifer. Forages primarily over water and marshes | Highly Unlikely. The project site and/or immediate area do not support suitable habitat for this species. |
| Tricolored blackbird<br>*Agelaius tricolor* | FSC/CFC/-- | Nests in dense thickets of cattails, tules, willow, blackberry, wild rose, and other tall herbs near fresh water. | Highly Unlikely. The project site and/or immediate area do not support suitable habitat for this species. |
| Little willow flycatcher<br>*Empidonax traillii brewsteri* | --/SE/-- | Willow thickets near wet meadows or standing water from 2,000-8,000 feet in elevation. | Highly Unlikely. The project site and/or immediate area do not support suitable habitat for this species. |
| American peregrine falcon<br>*Falco peregrinus anatum* | FD/SE/-- | Nests near water on high cliffs and banks; riparian areas. Inland and coastal waters are important year round. | Highly Unlikely. The project site and/or immediate area do not support suitable habitat for this species. |
| **California red-legged frog**<br>***Rana aurora draytonii*** | **FT/CSC/--** | **Quiet pools in streams, marshes, and ponds supporting dense stands of willows and cattails from 0-1,200 feet in elevation in the western foothills of the Sierra Nevada** | **Low Potential. While the Proposed Project would not have direct affects suitable habitat may be indirectly affected by highway runoff.** |

## Table 5.7-2 List of Potentially Affected Species

| Species | Status Federal/State/ CNPS | Preferred Habitat & Diet | Potential for Project to Affect |
|---|---|---|---|
| **Foothill yellow-legged frog *Rana boylii*** | **FSC/CSC/--** | **In or near rocky streams in a variety of plant associations; always near permanent water/western slopes of Sierra Nevada, other CA hills** | **Low Potential. While the Proposed Project would not have direct affects suitable habitat may be indirectly affected by highway runoff.** |
| Western spadefoot *Scaphiopus hammondii* | FSC/CSC | Breed in shallow, temporary pools formed by winter rains. Takes refuge in burrows. | Highly Unlikely. The project site and/or immediate area do not support suitable habitat for this species. |
| **Northwestern pond turtle *Clemmys marmorata marmorata*** | **FSC/CSC/--** | **Requires aquatic habitats with suitable basking sites. Nest sites most often characterized as having gentle slopes (<15%) with sandy banks and little vegetation.** | **Low Potential. While the Proposed Project would not have direct affects, suitable habitat may be indirectly affected by highway runoff.** |
| California horned lizard *Phrynosoma coronatum frontale* | FSC/CSC/-- | Open, sandy habitats below 4,000 feet in elevation. | Highly unlikely. The project site and/or immediate area do not provide suitable soils for this species. |
| Green sturgeon *Acipenser medirostris* | FSC/--/-- | Spawn in Sacramento, Feather, and Klamath rivers, juveniles occur in estuaries | Highly unlikely. Tennessee and Slate Creeks eventually flow into Folsom reservoir. Folsom dam catches any potential downstream sedimentation. |
| Delta smelt *Hypomesus transpacificus* | FT/--/-- | Delta habitats, rivers, lakes. | Highly unlikely. Tennessee and Slate Creeks eventually flow into Folsom reservoir. Folsom dam catches any potential downstream sedimentation. |
| Central Valley steelhead *Oncorhynchus mykiss* | FT/--/-- | Delta habitats, rivers, lakes. | Highly unlikely. Tennessee and Slate Creeks eventually flow into Folsom reservoir. Folsom dam catches any potential downstream sedimentation. |
| Winter-run Chinook salmon *Oncorhynchus tshawytscha* | FE/SE/-- | Delta habitats, rivers, lakes. | Highly unlikely. Tennessee and Slate Creeks eventually flow into Folsom reservoir. Folsom dam catches any potential downstream sedimentation. |
| Central Valley spring-run chinook salmon *Oncorhynchus tshawytscha* | FT/ST/-- | Delta habitats, rivers, lakes. | Highly unlikely. Tennessee and Slate Creeks eventually flow into Folsom reservoir. Folsom dam catches any potential downstream sedimentation. |
| Central Valley fall/late fall-run chinook salmon *Oncorhynchus tshawytscha* | FC/SCS/-- | Delta habitats, rivers, lakes. | Highly unlikely. Tennessee and Slate Creeks eventually flow into Folsom reservoir. Folsom dam catches any potential downstream sedimentation. |
| Sacramento splittail *Pogonichthys macrolepidotus* | FT/CSC/-- | Delta habitats, rivers, lakes. | Highly unlikely. Tennessee and Slate Creeks eventually flow into Folsom reservoir. Folsom dam catches any potential downstream sedimentation. |

## Table 5.7-2 List of Potentially Affected Species

| Species | Status Federal/State/ CNPS | Preferred Habitat & Diet | Potential for Project to Affect |
|---|---|---|---|
| Longfin smelt *Spirinchus thaleichthys* | FSC/CSC/-- | Delta habitats | Highly Unlikely. Tennessee and Slate Creeks eventually flow into Folsom reservoir. Folsom dam catches any potential downstream sedimentation. |
| Valley elderberry longhorn beetle *Desmocerus californicus dimorphus* | FT/--/-- | Elderberry shrubs at least 1" diameter below 3,000' in elevation. | Highly Unlikely. The project site and immediate area do not contain suitable habitat (elderberry shrubs). |
| South Forks ground beetle *Nebria darlingtoni* | FSC/--/-- | Riverine shoreline habitat associated with the south fork of the American River. | Highly Unlikely. The project site and/or immediate area do not support suitable habitat for this species. |
| Stebbin's morning-glory *Calystegia stebbinsii* | FE/SE/1B | Open chaparral with gabbro soils. | Highly Unlikely. No gabbro soils occur in the project site. |
| Pine Hill ceanothus *Ceanothus roderickii* | FE/--/1B | Gabbro soils in open stands of chaparral near Pine Hill. | Highly Unlikely. No gabbro soils occur in the project site. |
| **Red Hills soaproot *Chloragalum grandiflorum*** | **--/--/1B** | **Found in chaparral or woodland areas with gabbro or serpentine soils.** | **Low Potential. No plants were found on-site, but project may impact potential habitat (serpentine soils) for this species.** |
| Pine Hill flannelbush *Fremontodendron californicum* s d*ecumbens* | FE/--/1B | Usually found on the tops of rocky ridges with gabbro soils. | Highly Unlikely. No gabbro soils occur in the project site. |
| El Dorado bedstraw *Galium californicum sierrae* | FE/--/1B | Grows in live oak or black oak woodlands on gabbro soils. | Highly Unlikely. No gabbro soils occur in the project site. |
| **Bisbee Peak rush-rose *Helianthemum suffrutescens*** | **--/--/3** | **Found in chaparral, mostly on gabbro or serpentine soils.** | **Low Potential. No plants were found on-site, but project may impact potential habitat (serpentine soils) for this species.** |
| **Layne's butterweed *Senecio layneae*** | **FT/--/1B** | **Found in natural or disturbed rocky areas with chaparral, mostly on gabbro or serpentine soils.** | **Low Potential. No plants were found on-site, but project may impact potential habitat (serpentine soils) for this species.** |
| El Dorado County mule ears *Wyethia reticulata* | --/--/1B | Found in chaparral, woodlands and lower coniferous forest with clay or gabbro soils. | Highly Unlikely. No gabbro soils occur in the project site. |

*Source*: USFWS 1999, CNDDB 2001, Skinner and Pavlik 1994

| | | | |
|---|---|---|---|
| FE | Federally Endangered | FSC | Federal Species of Special Concern |
| FT | Federally Threatened | CSC | California Species of Special Concern |
| FD | Federally Delisted | 1B | California Native Plant Society listing of Rare, |
| SE | California Endangered | | Threatened, or Endangered plants in California |
| ST | California Threatened | 3 | Plants for which more information is needed |

### *California Department of Fish and Game*

A 1601 Streambed Alteration Agreement will be necessary for the project. A field visit with the CDFG will be conducted in order to discuss mitigation details.

### *U.S. Fish and Wildlife Service Section 7 Consultation*

Under Section 7 of the endangered species act, Federal agencies are required to consult with the U.S. Fish and Wildlife Service (USFWS) when a proposed Federal action (or those actions permitted or funded by a Federal agency) may affect listed species. Based on field surveys and habitat assessments for the three federally listed species (California red-legged frog, valley elderberry longhorn beetle and Layne's butterweed), the Proposed Project is not likely to affect federally listed species, and formal consultation should not be required (see Section 7.0 for more information on potential effects).

## 5.7.4 Impacts and Mitigation Measures

### *Significance Criteria*

An impact will be considered significant if either the Flyover Interchange Design Alternative or the Diamond Interchange Design Alternative adversely impact the biological resources in the region of where the interchange would be constructed.

### *Methodology*

Botanical and wildlife surveys, including special-status species surveys were completed as part of the California Department of Transportation (Caltrans) Natural Environment Study (NES) process. In addition, a formal delineation of potential jurisdictional waters of the U.S. was completed.

The California Department of Fish and Game's (CDFG) California Natural Diversity Database (CDFG, 2001) was consulted for information concerning sensitive botanical and wildlife resources within the vicinity of the project. This database search was completed for habitats within El Dorado County and for United States Geological Survey (USGS) 7.5 minute quadrangles "Shingle Springs" and "Placerville." The database printouts are presented in **Appendix H**. In addition, the California Native Plant Society's (CNPS) inventory (Skinner and Pavlik, 2001) was consulted to identify special-status plants potentially occurring within El Dorado County. A botanical survey within the project site from April, 2000 is in **Appendix I.**

An on-site assessment of the proposed interchange area was conducted on August 2, 2001, December 27, 2001, and February 6 and 11, 2002. The project site was evaluated to determine the existing biological resources within the project area. The survey evaluated the potential for special status species and wetland resources occurring within the project area. A plant and animal list for the species encountered during the surveys is presented as **Appendix G**.

### *Impact/ Mitigation*

### *Impact 5.7-1 Impacts to Upland Vegetation*

AA Under the No Project/Action Alternative, there will be no change in the existing conditions within the project area. ***No impact*** will occur under the No Project/Action Alternative.

AB Up to 1.1 acres of mixed oak woodland could be permanently removed by the Fly-Over Interchange Alternative. These impacts could include the removal of several existing trees and some California annual grassland. If oak trees would be removed, this would be a ***significant mitigable impact***. While permanent impacts to California annual grassland are considered ***less than significant***, some revegetation may be necessary to prevent erosion of exposed soils previously covered in grassland vegetation.

AC Up to 1.67 acres of mixed oak woodland could be permanently removed by the Diamond Interchange Alternative. These impacts could include the removal of several existing trees and some California annual grassland. If oak trees would be removed, this would be a ***significant mitigable impact***. While permanent impacts to California annual grassland are considered ***less than significant***, some revegetation may be necessary to prevent erosion of exposed soils previously covered in grassland vegetation.

### *Mitigation 5.7-1 Impacts to Upland Vegetation*

The impact identified above will be reduced to a ***less than significant*** level with the implementation of the following mitigation:

(A) The removal of riparian and upland vegetation will be minimized whenever possible.

(B) Temporally impacted annual grasslands and valley oak woodland will be restored by replanting native and naturalized species endemic to the site,

including valley oak (*Quercus lobata*), blue oak (*Quercus douglasii*), and native grass seed (as described in Section 4.0).

(C) All temporarily disturbed areas will be restored to original grade and revegetated to minimize erosion. The replanting process will be on-going throughout construction, with planting beginning as construction related activities end in a given area. Riprap will not be used as a substitute for revegetation except in areas where the project Engineer has deemed that vegetation will not likely become reestablished and channel erosion protection is necessary. Additional erosion control measures, such as straw mulch, may be used if vegetation cannot be immediately established during the wet season.

(D) In order to compensate for potential habitat on the site that would be lost to development, a payment into to El Dorado County's approved mitigation area for threatened and endangered plants of the Pine Hill gabbro formation shall be made. This payment should follow the County's formula, based on the number of square feet of development within different "mitigation zones." If the County does not accept this payment, then the same amount shall be paid into another mitigation fund to provide an equivalent level of mitigation.

### *Impact 5.7-2 Impacts to Non-Special Status Species*

AA Under the No Project/Action Alternative, there will be no change in the existing conditions within the project area. ***No impact*** will result under the No Project/Action Alternative.

AB, AC Construction of the interchange will result in short-term impacts to terrestrial wildlife. There is a regional abundance of common wildlife species and the relatively small amount of area that would be impacted permanently or temporarily will be ***less than significant*** to common wildlife.

### *Mitigation 5.7-2 Impacts to Non-Special Status Species*

None Required.

### *Impact 5.7-3 Impacts to Special-Status Species*

AA Under the No Project/Action Alternative, there will be no change in the existing conditions within the project area. ***No impact*** will result under the No Project/Action Alternative.

AB, AC There could be impacts to plant and animal special-status species within the project area. **Appendix G** lists all species observed during field investigations. None of the special-status species addressed in this document were observed in the project area. Nevertheless, actions will be undertaken to mitigate for the potential that special-status species could be in the project area.

### *Mitigation 5.7-3 Impacts to Special Status Species*

The impact identified above will be reduced to a ***less than significant*** level with the implementation of the following mitigation:

(A) Tree removal shall occur between October and February, which is outside of the nesting period for raptors.

(B) If the timing of the above Measure is not feasible, pre-construction nest surveys of trees to be removed and within 500 feet of construction activities will be conducted to ensure that no occupied nests are destroyed or disturbed. A qualified biologist shall conduct surveys prior to any vegetation removal that lies within the nesting period (i.e., March to July). If an occupied nest of a special-status bird is identified in vegetation planned for removal, the disturbance will be delayed until fledging of the nesting young has been verified by a subsequent survey. The CDFG will be consulted for any additional requirements if a nest is identified.

(C) Special-status bat species may roost behind loose bark on large snags in the Environmental Study Limits during the night or day. Mitigation may be achieved by surveying snags, that have a diameter at breast height (DBH) greater than 15 inches (38.1 centimeters), for evidence of roosting bats prior to removal. Snags should be should be checked in the evening and morning for the presence of bats by a qualified biologist prior to any removal activities. If any bats are present in the snags, the biologist should remove the bat for safe relocation at nighttime (bats flying during the day could be subject to predation by birds-of-prey).

### *Impact 5.7-4 Impact to Wetlands/Waters of the United States*

AA Under the No Project/Action Alternative, there will be no change in the existing conditions within the project area. ***No impact*** will result from the No Project/Action Alternative.

AB, AC Approximately 0.057 acre (0.023 hectare) of "waters of the U.S" would be permanently impacted by the construction of the Proposed Project. This permanent impact consists of the fill of a portion of an intermittent drainage during construction of the roadway, and is considered a ***significant mitigable impact***. Temporary impacts are those areas within 100 feet (30.5 meters) of the construction footprint within the project site. Up to 0.033 acre (0.013 hectare) of "waters of the U.S." could be temporarily impacted on-site. Any potential temporary impacts to Slate Creek may be avoided with the use of Best Management Practices (BMPs). No jurisdictional wetlands occur within the project boundaries. A Nationwide 14 permit will be obtained from the ACOE and a 1601 Streambed Alteration Agreement from CDFG.

### *Mitigation 5.7-4 Impact to Wetlands/Waters of the United States*

The impact identified above will be reduced to a ***less than significant*** level with the implementation of the following mitigation:

(A) Construction activities within 100 feet (30.5 meters) of intermittent streams will be restricted to the period of April 15 through October 15 to minimize the potential for rainfall events to mobilize and transport sediment to aquatic resources, or a BMP Plan designed to minimize sediment transport and approved by Caltrans will be implemented during construction activities.

(B) Appropriate mulch will be applied to areas where vegetation has been removed to reduce short-term erosion as soon as feasible after construction. Soils will not be left exposed during the rainy season.

(C) Silt fencing will be placed upstream and downstream of the construction zone to prevent sediment disturbed during construction from being transported and deposited outside of the construction zone.

(D) Sediment control measures will be in place prior to the onset of the rainy season and will be monitored and maintained in good working condition throughout the year.

(E) A spill prevention plan will be implemented for potentially hazardous materials. The plan will include the proper handling and storage of all potentially hazardous materials, as well as the proper procedures for cleaning up and reporting of any spills. If necessary, containment berms will be constructed to prevent spilled materials from reaching aquatic resources.

### *Impact 5.7-5 Cumulative Impact*

AA Under the No Project/Action Alternative, there will be no change in the existing conditions within the project area. ***No impact*** will result from the No Project/Action Alternative.

AB, AC Both alternatives may contribute to cumulative effects through reducing the amount of oak woodland habitat in the Sierra foothills. Proposed and current residential and commercial development along the Highway 50 corridor has likely reduced dispersal, foraging, and breeding habitat for several species of wildlife, thereby reducing the viability of local populations. Implementation of either alternative may contribute to this reduction in habitat, resulting in reduced management options. However, the Proposed Project is not expected to contribute significant cumulative impacts because of the relatively small area that will be impacted by the project and because of the mitigation measures that will be implemented as part of the project, which has reduced project effects to a ***less than significant*** level.

Cumulative effects to special status plants have occurred through the increased rate of construction of homes and businesses on the gabbro soils during the last 10 to 20 years. There has been extensive development along the Highway 50 corridor during this time period, with much of the land being cleared for commercial and residential uses. Residential construction in the nearby Cameron Park area in the midst of the chaparral community has limited the amount of potential habitat for these species in the foothills. Implementation of either of the proposed alternatives has the potential to contribute to this loss of habitat. However, with the implementation of mitigation measure 5.7-4, this cumulative effect will be reduced to a ***less than significant*** level.